QC ABSTRACT

NAME OF WORK: Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	WMM	Sieve Analysis	One Test		1	1
		Impact Value	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
2	DBM	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral Aggregate	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
3	BC	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
4	BITUMEN	Ductility	One Test		1	1
		Softening Point	One Test		1	1
		Penetration	One Test		1	1
		Flash Point	One Test		1	1
		Fire Point	One Test		1	1
5	TACK COAT	Rate of spread	One Test		1	1

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TEST RESULTS OF GRADATION FOR WMM

Lab ID : **CP-RW-2020-05-27-93** **Date: 30-03-20**

Customer : Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division

Agency : Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/229/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 27-03-20

Type of Mix : WMM (Wet Mix Macadam)

Date of test : 27-03-20

Oven Dry Weight : 11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	315	315	2.9	97.1	95-100
22.4	2259	2574	23.4	76.6	60-80
11.2	2179	4753	43.2	56.8	40-60
4.75	2251	7004	63.7	36.3	25-40
2.36	1621	8625	78.4	21.6	15-30
0.6	623	9248	84.1	15.9	8-22
0.075	1338	10586	96.2	3.8	0-5

Note:-

The results pertain to the samples received and tested.
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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 30-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	27-03-20

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.9	74.0
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.4
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	24.6	

Note:-

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 30-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of test	:	27-03-20

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.8%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.5%	
Combined Flakiness and Elongation Index for WMM	25.3%	

Note:-
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TEST RESULTS OF GRADATION FOR DBM
(IS 2386:(Part 1) 1963 (RA2011)

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 29-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Type of Mix	:	DBM-Plant (Dense Bituminous Macadam)
Date of test		27-03-20
Weight of Sample(gm)	:	5000

IS Sieve Size(mm)	Weight Retained(gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0	100	100
19	165	165	3.3	96.7	90-100
13.2	512	677	13.5	86.5	56-88
4.75	2759	3436	68.7	31.3	16-36
2.36	911	4347	86.9	13.1	4-19
0.3	358	4705	94.1	5.9	2-10
0.075	232	4937	98.7	1.3	0-8
PAN	63	5000	100.0	0.0	0

Note:-
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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR DENSE BITUMINOUS MACADAM

Lab ID : **CP-RW-2020-05-27-93** **Date: 30-03-20**

Customer : Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division

Agency : Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/229/2019-20

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 27-03-20

Type of Mix : DBM (Dense Bituminous Macadam)

Date of test : 27-03-20

Table 500-6 : Physical Requirements fo Coarse Aggregate for Bituminous Macadam

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	13.8	Combined Flakiness & Elongation Index for BM is Maximum 35%	IS:2386 Part I
	Elongation Index	7.2		
Strength	Aggregate Impact Value	25.2	Maximum 30%	IS:2386 Part IV
Specific gravity	Specific gravity	2.51	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.17	Maximum 2%	IS:2386 Part III

Note:-

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Quallity Manager

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 30-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Type of Mix	:	DBM(Dense Bitumnous Macadam)
Date of test	:	27-03-20

Type of Binder	:	60/70
% of Binder Used	:	5.0%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

Note:-
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Quality Manager

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TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 30-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Type of Mix	:	DBM (Dense Bituminous Mecadam)
Date of test	:	27-03-20

The results of the tests conducted on the Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	–

Note:-

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR DBM (IS 2386:(Part 1) 1963 (RA2011)

Lab ID : **CP-RW-2020-05-27-93** **Date: 31-03-20**

Customer : Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division

Agency : Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/229/2019-20

Source of Sample : Sample supplied by Agency

Date of Receipt : 30-03-20

Type of Mix : DBM (Dense Bituminous Macadam)

Date of test : 30-03-20

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	477	476.5
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	4.6	4.70
4	Average percentage	%	4.65	

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Quality Manager

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Lab ID : **CP-RW-2020-05-27-93** **Date: 31-03-20**

AFTER EXTRACTION(Trail-1)

Weight of Sample : 477 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.0	92.0	90-100
13.2	147	185	38.8	61.2	56-88
4.75	191	376	78.8	21.2	16-36
2.36	28	404	84.7	15.3	4-19
0.3	32	436	91.4	8.6	2-10
0.075	31	467	97.9	2.1	0-8

AFTER EXTRACTION(Trail-2)

Weight of Sample : 476.5 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0.0	100.0	100
19	38	38	8.0	92.0	90-100
13.2	147	185	38.8	61.2	56-88
4.75	191	376	78.9	21.1	16-36
2.36	28	404	84.8	15.2	4-19
0.3	32	436	91.5	8.5	2-10
0.075	27	463	97.2	2.8	0-8

Note:-
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TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2020-05-27-93**	**Date: 29-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.	
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division	
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013	
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	27-03-20	
Type of Mix	:	BC-Plant (Bituminous Concrete)	
Date of test	:	27-03-20	
Oven Dry Weight	:	5000 Grams	

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	89	89	1.8	98.2	90-100
9.5	702	791	15.8	84.2	70-88
4.75	895	1686	33.7	66.3	53-71
2.36	587	2273	45.5	54.5	42-58
1.18	492	2765	55.3	44.7	34-48
0.6	503	3268	65.4	34.6	26-38
0.3	528	3796	75.9	24.1	18-28
0.15	458	4254	85.1	14.9	12-20
0.075	350	4604	92.1	7.9	4-10
PAN	396	5000	100	0.0	0

Note:-
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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 30-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Type of Mix	:	BC(Bitumenous Concrete)
Date of test	:	27-03-20

Type of Binder	:	60/70
% of Binder Used	:	5.0%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.5	1.5	98.3	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

Note:-
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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS CONCRETE

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 30-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Type of Mix	:	BC (Bituminous Concrete)
Date of test	:	27-03-20

Table 500-16 : Physical Requirements fo Coarse Aggregate for Bituminous Concrete

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	12.4	Combined Flakiness & Elongation Index for BC is Maximum 35%	IS:2386 Part I
	Elongation Index	11.8		
Strength	Aggregate Impact Value	22.1	Maximum 24%	IS:2386 Part IV
Specific gravity	Specific gravity	2.68	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.21	Maximum 2%	IS:2386 Part III

Note:-

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Quallity Manager

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TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 30-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Type of Mix	:	BC (Bituminous Concrete)
Date of test	:	27-03-20

The results of the tests conducted on the Bituminous Concrete mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.14	11.13	10KN(min)
2	Marshal flow at 60°C, mm	3.52	3.51	2-4
3	Percent air Voids	4.82	4.83	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.28	14.26	13-15
5	Percent Voids filled with Bitumen(VFB %)	71.87	71.63	65-75
6	Density, g/cc	2.25	2.26	–

Note:-

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TEST RESULTS OF BITUMEN BINDAR CONTENT AND GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2011)

Lab ID : **CP-RW-2020-05-27-93** **Date: 28-03-20**

Customer : Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.

Address : Vidyaranyapura Sub Division, BBMP, Bangalore.

Project Name : Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division

Agency : Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013

Customer Reference : BBMP/EE/BTP/WO/229/2019-20

Source of Sample : Sample supplied by Agency

Date of Receipt : 01-04-20

Type of Mix : BC (Bituminous Concrete)

Date of test : 27-03-20

Sl.no	Description	Index	Trail 1	Trail 2
1	Weight of the Sample	A	500	500
2	Weight of the sample After extraction	B	469.5	469
3	Bitumen percentage	$\frac{A-B}{A} \times 100$	6.10	6.20
4	Average percentage	%	6.2	

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Lab ID : **CP-RW-2020-05-27-93** **Date: 28-03-20**

AFTER EXTRACTION - Trail-1

Total Weight of the Sample(gm) : 469.5

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.9	99.1	90-100
9.5	62	66	14.1	85.9	70-88
4.75	112	178	37.9	62.1	53-71
2.36	88	266	56.7	43.3	42-58
1.18	29	295	62.8	37.2	34-48
0.6	11	306	65.2	34.8	26-38
0.3	46	352	75.0	25.0	18-28
0.15	45	397	84.6	15.4	12-20
0.075	52	449	95.6	4.4	4-10

AFTER EXTRACTION - Trail-2

Total Weight of the Sample(gm) : 469

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-23(grading-2)
19	0	0	0.0	100.0	100
13.2	4	4	0.9	99.1	90-100
9.5	62	66	14.1	85.9	70-88
4.75	112	178	38.0	62.0	53-71
2.36	88	266	56.7	43.3	42-58
1.18	29	295	62.9	37.1	34-48
0.6	11	306	65.2	34.8	26-38
0.3	46	352	75.1	24.9	18-28
0.15	45	397	84.6	15.4	12-20
0.075	50	447	95.3	4.7	4-10

Note:-

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DETERMINATION OF RATE OF SPREAD TACK COAT

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 02-04-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer Reference	:	BBMP/EE/BTP/WO/229/2019-20
Sample Condition	:	Satisfactory
Date of Receipt	:	01-04-20
Type of Mix	:	Tack coat
Date of test	:	01-04-20

Sl.No	Determination	Unit	TEST 1	TEST 2
1	Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
2	Area of Plate (a)	Sq.mtr	0.09	0.09
3	Initial Wt of empty Plate (b)	Kg	0.78	0.76
4	Final weight of plate after application of tack Coat (c)	Kg	0.80	0.78
5	Weight of tack Coat (d=c-b)	Kg	0.023	0.023
6	Rate of spread of tack coat	Kg/sq.m	0.256	0.256
7	Average	Kg/sq.m	0.256	
8	Specified Limit	Kg/sq.m	0.250 Kg/sq.m	

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Quality Manager

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TEST REPORT ON BITUMEN

Lab ID	:	**CP-RW-2020-05-27-93** **Date: 28-03-20**
Customer	:	Assistant Executive Engineer,Vidyaranyapura Sub Division, BBMP, Bangalore.
Address	:	Vidyaranyapura Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to Roads and drains at Nanjappa layout,Chamundeshwari layoutC.Ramaiaah layout,Bloom Moon Garden,Blue Field Garden and surrounding area in ward no 10 (Doddabommasandra),Vidyaranyapura sub Division
Agency	:	Sri Ashwathnarayana,#38, Chanappa layout,Sharadhabanagara, jalahalli village, Bangalore-560013
Customer's Reference	:	BBMP/EE/BTP/WO/229/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	27-03-20
Sample Type	:	Bitumen
Reference to BIS codes	:	IS: 1201-1220(1978) (Reaffirmed-2004)
Date of test	:	27-03-20

Test Results

Sl.no	Name of Test	Result	Requirements as per IS:73-2013
1	Penetration at 25°C , in 1/10th mm	**64**	60 to 70
2	Softening Point, °C	**51.2**	Min. 40°C
3	Ductility, cm	**98**	Min. 75cm
4	Flash point, °C	**245**	Min. 220°C
	Fire point, °C	**272**	

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